

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte KIM M. DARDEN and HOKON O. FLOGSTAD

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Appeal No. 97-2993  
Application No. 08/363,133<sup>1</sup>

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ON BRIEF

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Before KRASS, JERRY SMITH, and FRAHM, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 9, all of the claims pending in the application.

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<sup>1</sup> Application for patent filed December 23, 1994.

The invention is directed to a passive, L-C low pass filter double correlator circuit for eliminating noise from a video signal read out from a CCD image sensor.

Independent claim 1 is reproduced as follows:

1. A correlator circuit for removing noise from a signal, comprising:

an input section for receiving an analog signal having a period including a first interval with a first signal value and a second interval with a second signal value, said input section including a series capacitor and parallel input resistor;

a passive, double correlating low pass filter section coupled to said input section and including at least one series inductor, parallel capacitor (L-C) low pass filter section; and

an output section coupled to said low pass filter section for outputting an output analog signal across an output resistor, said output signal being free from noise and having a signal value which is a function of the difference between said first signal value and said second signal value.

The examiner relies on the following references:

Ichida et al. (Ichida)	4,220,967	Sep. 2,
1980		
Smith	4,287,441	Sep. 1,
1981		

Sedra, A.S., et al. "Microelectronic Circuits." Third edition (1990), pp. 762-774.

Claims 1 through 9 stand rejected under 35 U.S.C. 103. As evidence of obviousness, the examiner cites Smith in view of Sedra with regard to claims 1 through 4 and 6 through 9, adding Ichida to this combination with regard to claim 5.

Reference is made to the brief and answer for the respective positions of appellants and the examiner.

OPINION

It is the examiner's contention that Smith discloses the subject matter of instant claim 1 but for the low pass filter section. Smith employs sample and hold circuits but the examiner relies on a recitation at column 6, line 16 of Smith, to wit, "A S/H circuit performs roughly as a low-pass filter," as a suggestion that a low pass filter section can be used in place of the disclosed S/H circuits. Then, the examiner cites Sedra for a showing that filters may make use of inductors and capacitors so that, if one were to substitute a low pass filter for the S/H circuits of Smith, then that filter would be made of inductors and capacitors.

We disagree. At best, the cited portion of Smith can only be held to be a suggestion that, *under the right circumstances*, such as the particular arrangement of Smith, a S/H circuit might *act* like a low-pass filter. Clearly, however, a S/H circuit is not, inherently, a low-pass filter and we find no reason why the skilled artisan would have removed the active S/H circuit disclosed by Smith and substituted therefor a passive low-pass filter, as claimed.

The examiner's further reasoning for substituting a passive low-pass filter for Smith's S/H circuit, at the bottom of page 6 of the answer, i.e., elimination of noise within the S/H circuit and the elimination of timing circuitry required for the S/H circuit, appears to be based more on appellants' own disclosure of the advantages of the instant invention than on any suggestion by the applied references.

The Ichida reference, employed by the examiner with regard to claim 5 to show a Bessel filter, does nothing to remedy the deficiencies of the Smith and Sedra references.

The examiner's rejection of claims 1 through 9 under 35 U.S.C. 103 is reversed.

REVERSED

ERROL A. KRASS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
JERRY SMITH	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES

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ERIC FRAHM )  
Administrative Patent Judge )

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